

REMARKS

The present application was filed on September 15, 1999 with claims 1-6. Claims 7-10 were added in an Amendment dated October 28, 2004. In the outstanding Office Action dated March 18, 2005, the Examiner has: (i) objected to claims 4-6; and (ii) rejected claims 1-10 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,314,434 to Shigemi et al. (hereinafter "Shigemi"), in view of U.S. Patent No. 5,870,545 to Davis et al. (hereinafter "Davis").

In this response, claims 1 and 4-8 have been amended, and claim 11 has been added. Applicants traverse the §103 rejection for at least the reasons set forth below. Applicants respectfully request reconsideration of the present application in view of the above amendments and the following remarks. A Request for Continued Examination (RCE) is being submitted currently herewith in order to have the amendments to the claims made herein entered as a matter of right.

The Examiner has objected to claims 4-6 as being improper dependent claims (Office Action; page 2, paragraph 3). In response, Applicants have amended claims 4-6 in a manner which is believed to address the objections to the claims. Specifically, these claims have been rewritten into independent form similar in scope to claim 1. Accordingly, withdrawal of the objections to claims 4-6 is respectfully solicited.

Claims 1-10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shigemi, in view of Davis. With regard to independent claim 1, as well as claims 4-6 which are of similar scope, the Examiner acknowledges that Shigemi fails to teach a timed-evaluation step which continues the processing to start the target-activity even if not all truth-values of the incoming control-connectors have been posted yet, as required by claim 1 (final Office Action; page 3, last paragraph). The Examiner also acknowledges that Shigemi fails to disclose "using Boolean values as truth-values" (final Office Action; page 4, paragraph 2). However, the Examiner maintains the rejection set forth in his previous Office Action dated July 28, 2004, contending that Davis teaches "concurrent processing of activities (col. 14, lines 2-8)" (final Office Action; page 3, last paragraph) and "using Boolean values to control processing of the activities (col. 12, lines 52-60, col. 12, lines 44-51)" (final Office Action; page 4, paragraph 2), and that it would have been obvious to modify Shigemi in the manner taught by Davis to obtain the claimed invention. Applicants respectfully disagree with these contentions.

Applicants respectfully assert that the recited combination of Shigemi and Davis fails to teach or suggest all of the elements set forth in the subject claims, as is necessary to establish a *prima facie* case of obviousness under 35 U.S.C. §103(a). As stated above, and as acknowledged by the Examiner, Shigemi fails to disclose at least a timed-evaluation step which continues the processing to start the target-activity even if not all truth-values of the incoming control-connectors have been posted yet, as required by claim 1. Applicants assert that Davis also fails to disclose at least this feature of the claimed invention, and thus fails to supplement the deficiencies of Shigemi.

Specifically, Davis does not teach or suggest any mechanism whatsoever for performing a timed-evaluation step. In this regard, the Examiner fails to adequately address Applicants' arguments presented in their previous response dated October 28, 2004. Instead, the Examiner states that "[i]n response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where rejections are based on combinations of references" (final Office Action; page 6, last paragraph). While this statement may be true, Applicants respectfully submit that when neither of the prior art references disclose a particular element of the claim, it necessarily follows that the combination also cannot teach or suggest that element. In this instance, Applicants, in their previous response, presented clear arguments that the combination of Shigemi and Davis fails to teach or suggest at least a timed-evaluation step which continues the processing to start the target-activity even if not all truth-values of the incoming control-connectors have been posted yet, as required by claim 1.

Notwithstanding the above traversal, however, Applicants assert that the Examiner's §103 rejection is rendered moot in view of the above amendments to the claims. Specifically, claim 1 has been amended to further specify the time-interval associated with at least a given one of the incoming control-connectors of the target activity as "defining a maximum period of time, as measured from a reference point, after which the target-activity is to be started." Support for this amendment may be found in the present specification, for example, beginning on page 19, line 27. The prior art of record, when considered either individually or in combination, fails to teach or suggest at least this additional feature of amended claim 1.

With regard to the timed-evaluation step recited in claim 1, the Examiner contends that such a step is disclosed generally in Shigemi, at column 9, line 67, and FIGS. 1 and 4 (as item 11). Applicants respectfully disagree with this contention. In contrast to the claimed invention, Shigemi

discloses a timer event processor (11) which “generates a timer event at a specified time of day, in response to a request from the processing engine 20” (Shigemi; column 9, line 67, to column 10, line 2; emphasis added). Applicants assert that a “timer event” is distinguishable from a time-interval, as set forth in claim 1. Furthermore, Shigemi fails to teach or suggest a time-interval defining a maximum period of time after which the target-activity is to be started, as required by claim 1.

Similarly, Davis fails to teach or suggest such a feature, and therefore the combination of Shigemi and Davis does not teach or suggest at least this additional feature of claim 1. With regard to the timed-evaluation step of the claimed invention, the Examiner contends that Davis, at column 14, lines 2-8, discloses concurrent processing of activities (final Office Action; page 3, last paragraph). Applicants respectfully disagree with this contention. While Davis may disclose “rule nodes” that can “provide controlled process concurrency, including rendezvous points offering full or partial synchronization” (Davis; column 14, lines 6-8; emphasis added), Applicants assert that the process concurrency disclosed by Davis applies only to rule nodes, and not to the target-activity, as required by claim 1. The target-activity set forth in claim 1 represents a work item of the process and, as such, cannot be analogized to “rule nodes” as taught by Davis.

As set forth in Applicants’ previous response, if any analogy can be made between the claimed invention and the system taught by Davis, the target-activity recited in claim 1 may be comparable to the “work nodes 41, 43, 45, 46, 48, 50, 52, 54” disclosed in Davis (Davis; column 6, lines 52-54). However, Davis explicitly states that a work node “has at most one inward arc” (Davis; column 6, lines 39-40; emphasis added), and thus is not capable of evaluating start-conditions associated with multiple incoming connectors to a given target-activity, as required by the claimed invention. The combination of Shigemi and Davis clearly fails to teach or suggest a mechanism for evaluating start conditions for a given target-activity capable of handling multiple incoming connectors, and thus fails to disclose a timed-evaluation step which continues the processing to start the target-activity even if not all truth-values of the incoming control-connectors have been posted yet, as explicitly recited in claim 1. Moreover, the combination of Shigemi and Davis fails to teach or suggest a time-interval defining a maximum period of time after which the target-activity is to be started, as required by amended claim 1.

For at least the reasons given above, Applicants submit that a *prima facie* case of obviousness has not been established, and therefore independent claim 1, as amended, is believed to be patentable over the prior art of record. Accordingly, favorable reconsideration and allowance of claim 1 are respectfully requested.

Claims 4-8, as amended, are independent claims similar in scope to claim 1. Consequently, these claims are also believed to be patentable over the prior art of record for the same reasons presented above in connection with claim 1. Accordingly, favorable reconsideration and allowance of amended claims 4-8 are respectfully requested.

With regard to claims 2 and 3, which depend from claim 1, and claims 9 and 10, which depend from claim 8, Applicants assert that these claims are also patentable over the prior art of record by virtue of their dependency from their respective base claims, which are believed to be patentable for at least the reasons given above. Furthermore, one or more of these claims define additional patentable subject matter in their own right. For example, claim 2 further defines the timed-evaluation step as utilizing, as a starting point for the time interval, the point in time when a commencing activity is completed. The Examiner contends that Davis, at column 12, lines 18-26 and 44-51, column 13, lines 10-20, column 17, lines 53-56, and Figure 7, discloses such features of claim 2. Applicants respectfully disagree with this contention and submit that the Examiner incorrectly analogizes a "start work node 150" (Davis; column 13, lines 13-15) with the use of the completion of a commencing activity as the starting point of the associated time-interval. However, Davis clearly defines the "start work node" as a work node that "has no inward arc and is started when the process 149 begins execution" (Davis; column 13, lines 15-17). Furthermore, Davis fails to disclose any timed-evaluation step which can be reasonably analogized to the timed-evaluation step set forth in claim 2, and moreover fails to disclose using, as a starting point for the time-interval, the point in time when the commencing-activity is completed, as required by claim 2. Likewise, Shigemi fails to disclose such features, and thus the combination of Shigemi and Davis do not teach or suggest the additional limitations set forth in claim 2.

For at least the above reasons, claims 2, 3, 9 and 10 are believed to be patentable over the cited prior art, not merely by virtue of their dependency from their respective base claims, but also in their own right. Accordingly, favorable reconsideration and allowance of these claims are respectfully requested.

With regard to newly presented claim 11, this claim is similar in scope to claim 1, and is therefore believed to be patentable over the prior art for at least the reasons presented above in connection with claim 1. Claim 11 further defines the method for processing start-conditions of process-activities as "repeating the timed-evaluation procedure for another one of the incoming control-connectors, until all of the incoming control-connectors of the target-activity have been evaluated." Moreover, as set forth in claim 11, the processing method is operative in one of at least two modes, wherein in the first mode, "the process may be started by evaluating a truth-value of a start-condition once truth-values of all incoming control-connectors of the target-activity have been posted," and in the second mode, the process may start the target-activity "even if the truth-values of all incoming control-connectors have not yet been posted." Support for these additional features may be found in the present specification, for example, on page 19, lines 3-23, and page 20, lines 22-24. Applicants assert that these additional features of the invention are also not taught or suggested by the cited prior art, when considered either individually or in combination. Accordingly, favorable consideration and allowance of claim 11 are respectfully solicited.

In view of the foregoing, Applicants believe that pending claims 1-11 are in condition for allowance, and respectfully request withdrawal of the §103 rejections.

Respectfully submitted,



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